

Using a Non-Aversive Treatment Package to Increase Food Repertoire in a child with Autism

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Introduction

- Food selectivity includes food refusal, limited food repertoire and high frequency food intake
- Food Selectivity can be specific to: texture, temperature, smell, color, shape, presentation, packaging, brand, utensil requirement, etc.
- 40-90% of children with ASD exhibit food selectivity to varying degrees
- Most common approach to treatment is the use of Escape Extinction

Systematic Desensitization

- Gradual exposure to fear (less demanding form of stimulus)
- Stimulus fading in the form of gradually increased exposure to stimulus + Differential Reinforcement
- Mini-extinctions being shaped/forward chained into tolerating or engaging with previously aversive stimulus

Why Systematic Desensitization over Escape Extinction?

- Easier to implement with less supervision
- Less aversive for child and person implementing procedure (therapist and parent)
- Parents may be more successful with implementation
- Reduces likelihood of reinforcing inappropriate behaviours on a VR schedule
- Can fit under PBS paradigm

Method

Background

- Client diagnosed with ASD at 2.11 years of age
- Program feeding program began at 3.5 years of age and ran for 9 months
- Exclusively consumed 4 foods, confirmed by 3 day food journal
- High food refusal, limited repertoire and high single food intake
- High functioning, verbal, strong imitative repertoire, very compliant

Session Description

- ABA sessions took place in 1:1 therapy room, 4 times per week
- Feeding program ran for 20 minutes every ABA session

Plate Set Up



Procedures

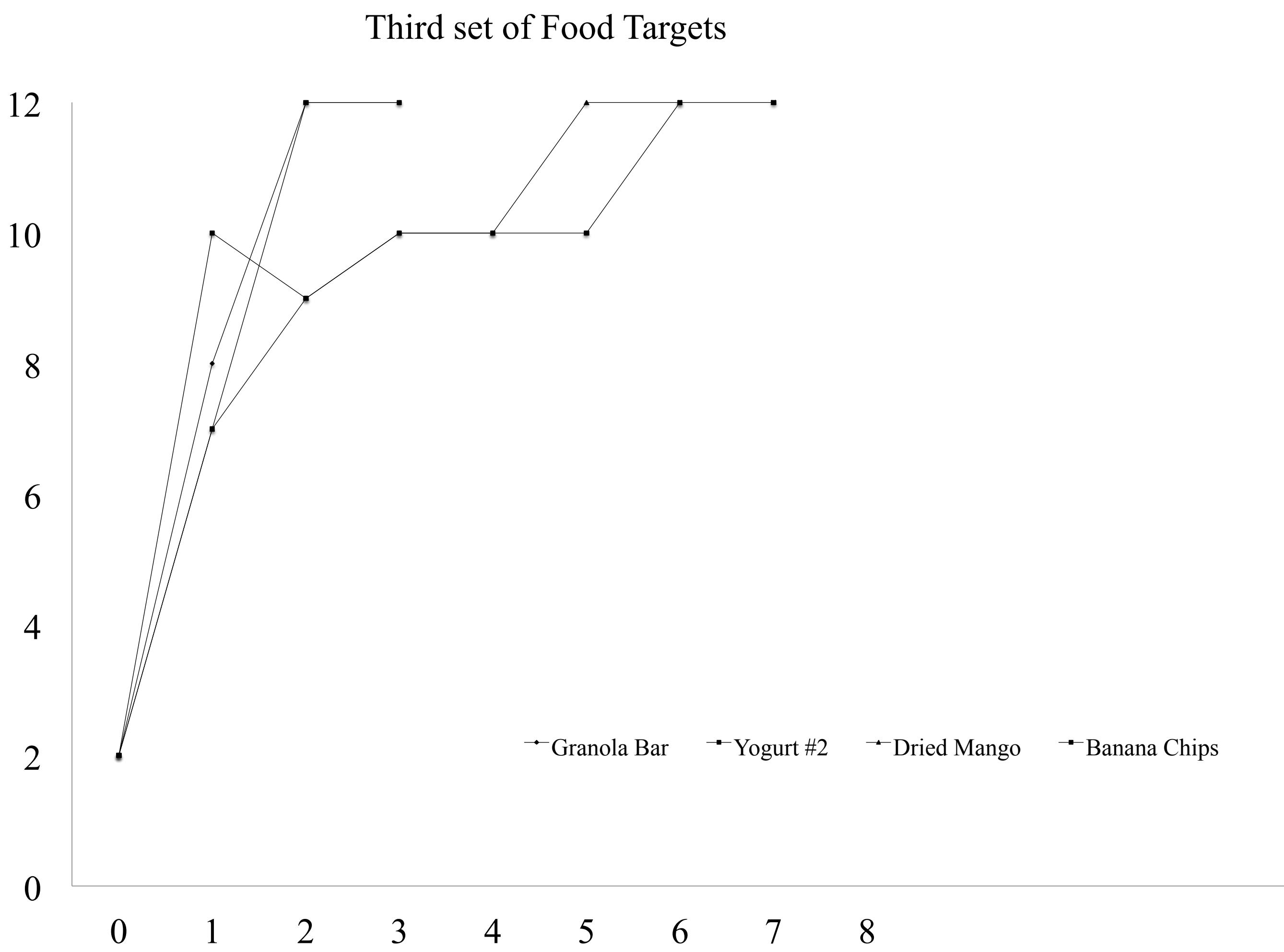
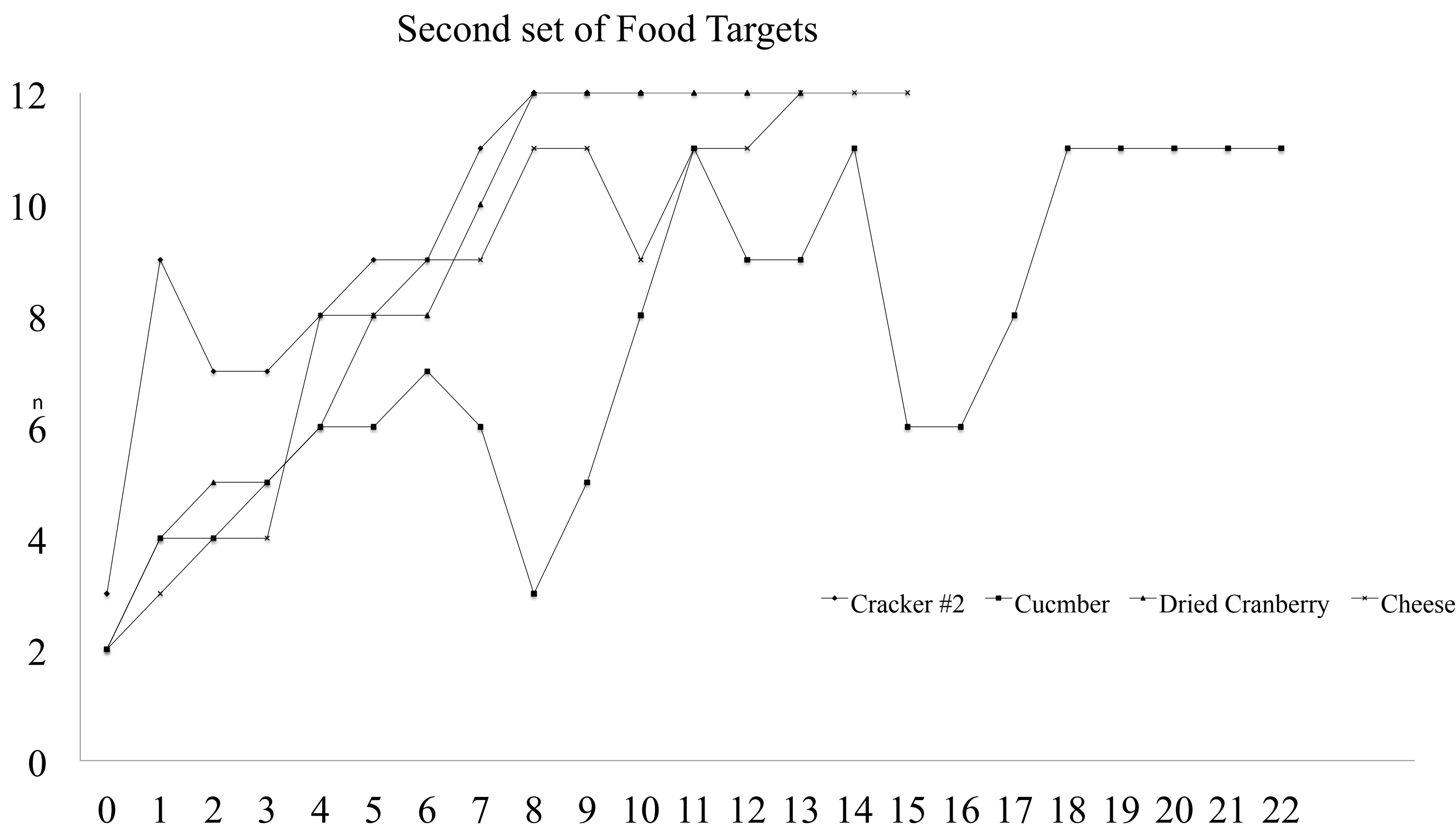
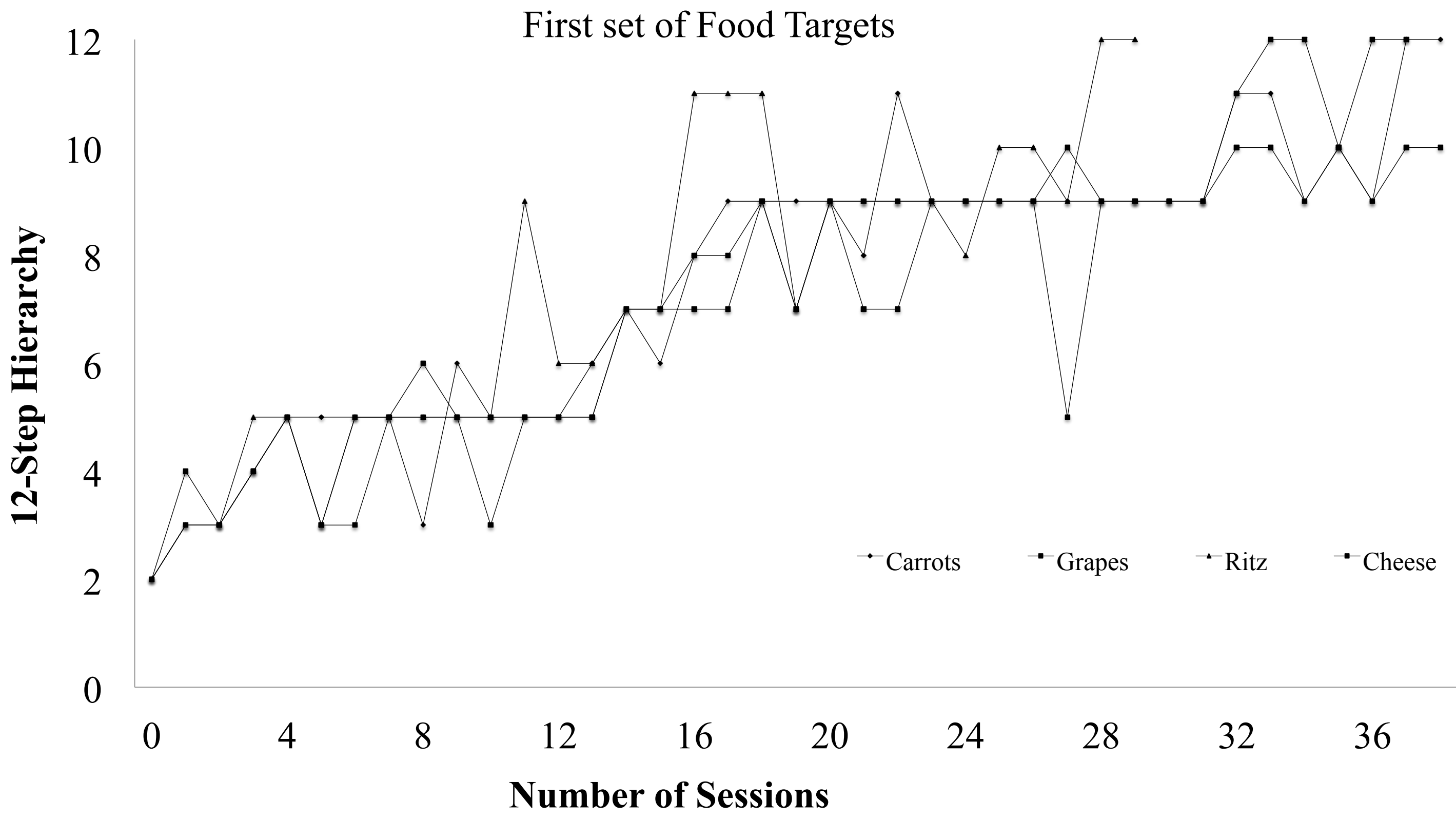
- 3-day food journal was completed for initial baseline
- A 12-step graduated exposure hierarchy was developed
- 4 target foods were cut up into small pieces
- Client had choice of target food each trial
- Client was guided through 12 desensitization steps without physical prompting
- If client engaged in a gagging response the therapist would move back 2 steps
- Tangible reinforcement and escape from the table were provided upon obtaining 5 tokens, tokens given on VR:3 and social praise on FR:1
- BI recorded furthest step attained during the session per food
- Mastery Criteria was 2 consecutive sessions at Step 12
- Once 1 food was mastered, target was replaced by another

12-Step Graduated Exposure Food Hierarchy

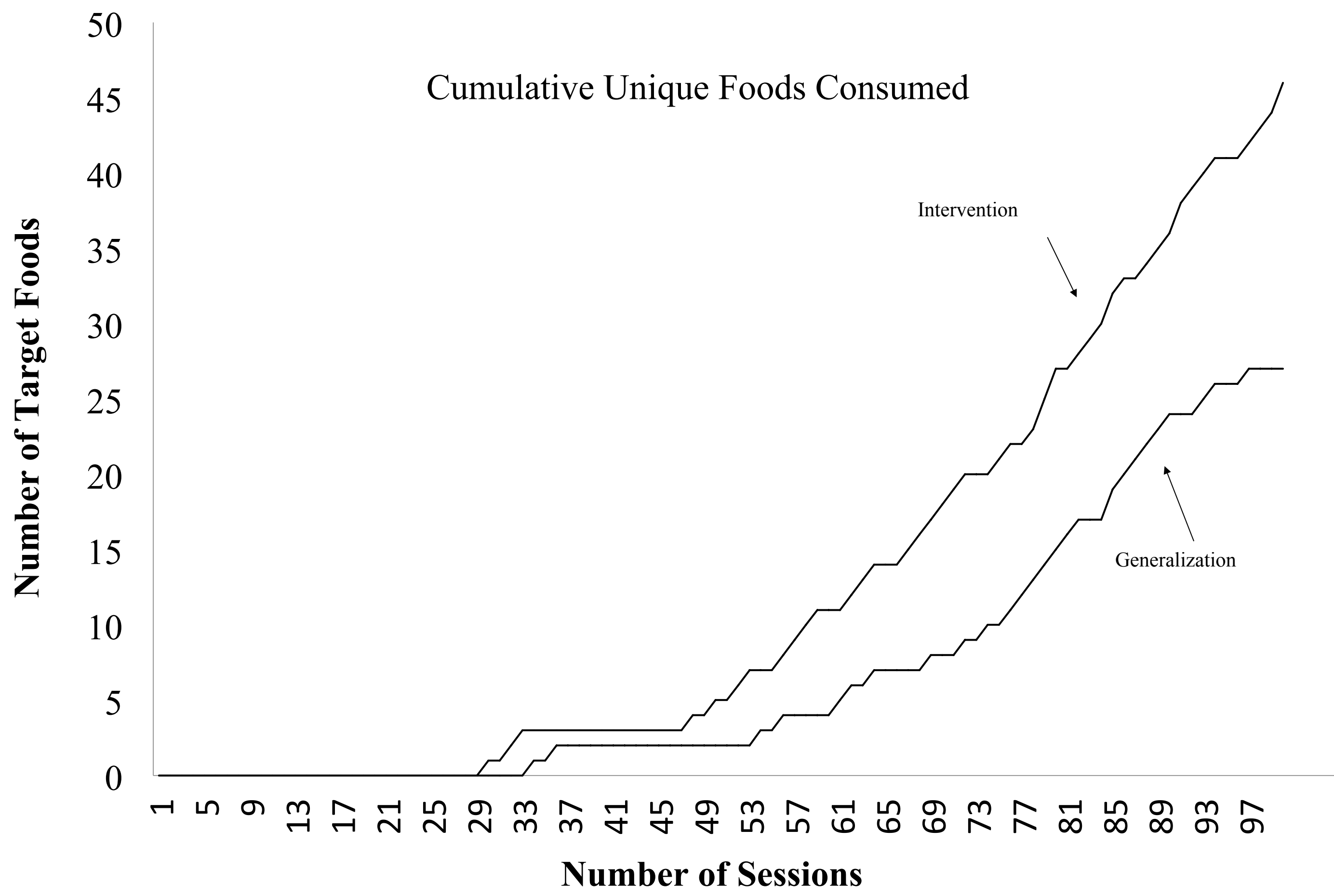
Table 1. Daily tracking sheet for intervention with 12-step Food Hierarchy

12-Step Hierarchy	Target Food: Carrots	Target Food: Cheese	Target Food: Cracker	Target Food: Grape
1.Tolerate food in therapy room				
2.Tolerate food on therapy table				
3.Tolerate food within 1 ft.				+
4.Touch food and throw away	+			++
5.Smell food and throw away	+	+		+
6.Kiss food and throw away	+	++	+	+
7.Lick food and throw away	++	++	+	
8.Lick food 5x and throw away			+	
9.Break food with teeth and throw away			+	
10.Chew food 5x and throw away			+	
11.Eat a small piece				
12.Eat an entire piece				
Furthest Step attained				

Results



Results (cont.)



Results Summary

- Intervention lasted 100 sessions
- Food acceptance increased from 4 to 50+ unique foods
- 27/50 foods generalized to different settings and people
- The first set of four targets took an average of 33 days to reach mastery criteria
- The second set of four targets took an average of 12 days to reach mastery criteria
- The third set of four targets took an average of 3.75 days to reach mastery criteria
- After 30 target foods were mastered, pre-made frozen meals were introduced and mastered with the same rate

Discussion

- Systematic desensitization was effective to increase food repertoire and decrease food refusal
- 54% of targets generalized across different people and different settings
- Parents reported less meal time behaviors and program was discontinued as parents noted food selectivity was no longer a concern
- Pre treatment 3 day food journal showed only 4 foods consumed
- Post treatment food journal revealed 15 unique foods consumed

Limitations

- Sample size of 1
- Required 1:1 implementation
- No functional analysis conducted prior to beginning treatment – conclusive function for food selectivity undetermined
- Parent cooperation to supply food, i.e., some sessions did not have all the current targets and would have to use replacement targets
- Non-aversive approaches may take significant time and effort before seeing results (i.e. client took 28 days of exposure to target food before independent oral consumption)

